



UNITED STATES PATENT AND TRADEMARK OFFICE

MN
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,728	11/18/2003	Barbara Liskov	CIS03-24(7024)	5041
<div>7590 04/19/2007 Barry W. Chapin, Esq. CHAPIN & HUANG, L.L.C. Westborough Office Park 1700 West Park Drive Westborough, MA 01581</div>			<div>EXAMINER JEAN GILLES, JUDE</div> <div>ART UNIT PAPER NUMBER 2143</div>	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/715,728

Applicant(s)

LISKOV, BARBARA

Examiner

Jude J. Jean-Gilles

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01/29/04

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is responsive to communication filed on 11/18/2003.

Information Disclosure Statement

1. The references listed on the Information Disclosure Statement submitted on 01/29/2004 have been considered by the examiner (see attached PTO-1449A).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, recites the confusing phrase “ *the group of content servers*” in line 5.

Appropriate correction is required. The above noticed problem is just exemplary. Applicant is required to totally check the application for error and correct the same.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-47** are rejected under 35 U.S.C. 102(e) as being anticipated by Slater et al (Slater), Patent Pub. No. US 2004/0010544 A1.

Regarding **claim 1-47** ,

1. Slater discloses a In an information services network having channels, each channel including a plurality of content items, at least one channel including items to be served from at least one content server, where channel items vary over time, and items are replicated from origin servers to the content servers that serve the channel, a method of reporting replication status from the group of content servers in a channel (0010; fig. 3) comprising:

maintaining a channel description of content via a sequence of change events, each event indicative of action for a particular file and each event having an associated incrementing event number such that each successive event has an increasing event number (0011, 0085);

identifying, upon completion of a particular change event, the event number corresponding to the event as completed (0141-0142);

Art Unit: 2143

reporting, for each of a plurality of content servers in the channel, an indication of event completion via a threshold event number, the threshold number corresponding to a point of progression in the incrementing event numbers (0121-0124); and aggregating reports from the plurality of content servers to obtain a global status report (0337, 0359, and 0373).

2.

The method of claim 1 wherein the change event is add/delete for a particular file in the channel (0011).

3.

The method of claim 1 wherein the change events further comprise ordering categories, each of the change events corresponding to one of a plurality of ordering categories, the ordering categories indicative of an alternate ordering criteria (0103-0108; 0141).

4.

The method of claim 3 wherein the ordering category is indicative of a replication priority for the corresponding file (0190; 0301-0304).

5.

The method of claim 3 wherein the ordering category is indicative of an origin server for the corresponding file (0190; 0301-0304).

6.

The method of claim 1 wherein the threshold event number is a progression

threshold for each of the ordering categories and the reporting further comprises the progression threshold for a plurality of ordering categories (0121-0124).

7.

The method of claim 3 wherein the channel description is maintained as status information in the content servers, the status information including the progression threshold within each of the ordering categories, wherein the replication status report omits transmitting cumulative, file specific information deterministic from the progression threshold (0109-0111).

8.

The method of claim 3 wherein the status report further includes an incomplete list, the incomplete list indicative of files having an event number previous to the reported event number for which event completion has not occurred (0141-0142).

9.

The method of claim 3 wherein the status report further report includes a present list, the present list indicative of files having an event number successive to the reported event number for the ordering category and for which the event is completed (0141-0142).

10. The method of claim 1 wherein the indications of event completion further includes absolute and range references (0299).

11. The method of claim 1 wherein aggregating includes obtaining the channel description from one of the content servers and interpreting status reports from content

Art Unit: 2143

servers using the obtained channel description as a reference channel description (0437).

12. The method of claim 1 wherein the channel description has a maximum event number and each of the status reports also has a maximum event number, further including comparing that the maximum event number for the channel description is not less than the maximum event number of each of the status reports (0404-0400).

13. The method of claim 11 further comprising validating the accuracy of the status report, accuracy being indicated such that the management server can interpret a status report if its highest event number is not greater than highest event number of the reference channel description (0417-0420).

14. The method of claim 13 wherein if management server cannot interpret a report it refreshes information in the reference catalog such that reference channel description accurately reflects current information (0417-0420).

15. The method of claim 13 wherein if management server can interpret a report, it computes whether it can determine status of a particular content item, using the item's event number in the reference catalog, such that:

if the event number is greater than the largest event number sent in the status report, then the status of that item cannot be determined; and

if the event number in the reference catalog is equal to or less than the largest event number in the status report, an accurate report can be determined (0417-0420).

16. The method of claim 15 wherein if an accurate status report can be determined

Art Unit: 2143

examining the report for the ordering category corresponding to the particular content item from the reference catalog, such that the particular content item is computed to be present if:

the corresponding event number is less than or equal to the threshold of that category; and the corresponding event number is not in the incomplete list (0417-0420).

17. The method of claim 16 wherein the particular content item is computed to be present if the corresponding event number is listed in the present list (0417-0420).

18. The method of claim 15 wherein, if an accurate status report cannot be determined, the management server selectively:

reports inability to compute the accurate status report, or

requests more current information from a content server such that the reference channel description reflects current information (0417-0420).

19. The method of claim 1 wherein aggregating the reports further comprises computing a ratio of files which have been replicated at each of the set of content servers in the channel(0417-0420).

20. The method of claim 1 wherein aggregating the reports further comprises computing a ratio of the content servers in the set which have replicated a particular file (0376).

21. The method of claim 1 wherein the global status report is produced in response to an operator request (0376).

22.

A data communications device comprising:

a processor (fig. 26, item 2606; par 0374);

Art Unit: 2143

an interface to an information services network having channels (item 2610), each channel including a plurality of content items, at least one channel including items to be served from at least one content server, where channel items vary over time, and items are replicated from origin servers to the content servers that serve the channel, a method of reporting replication status from the group of content servers in a channel (fig. 26; 0374-0377; ; and

a memory, the memory operable to store instructions, the processor operable on the instructions to (2608):

maintain a channel description of content via a sequence of changes events each event change indicative of action for a particular file and each change having an associated incrementing event number such that each successive event has an increasing event number (0011, 0085);

identify, upon completion of a particular change event, the event number corresponding to the event as completed;

report, for each of a plurality of content servers in the channel, an indication of event completion via a threshold event number, the threshold number corresponding to a point of progression in the incrementing event numbers(0121-0124); and

aggregate reports from the plurality of content servers to obtain a global status report.

Claims 23-30 are similar in scope to the dependent claims of independent claim 1 and are rejected for the same reasons as claims 2-21 above.

31. A method for reporting replication status of media content in a content delivery network (CDN) comprising:
identifying a set of content items for replication at a content server;
enumerating content items received, via the replication, at the content server from the identified set of content items; and
reporting the enumerated content items received by indicating a progression threshold in the identified set corresponding to the enumerated content items (0121-0124).

Claims 32-35 are similar in scope to the dependent claims of independent claim 1 and are rejected for the same reasons as claims 2-21 above.

36. A data communications device for reporting replication status of media content in a content delivery network (CDN) comprising:
at least one content server operable to receive a channel manifest identifying a set of content items for replication at the content server and further operable to fetch the identified content items from at least one origin server in communication with the content server (0011, 0085);
a catalog indicative of content items in the channel manifest received by the content server from the origin servers;
a replication status daemon operable to enumerate content items received at the content server from the identified set of content items in the channel (0141-0144); and

Art Unit: 2143

a replication status reporter operable to report the enumerated content received by indicating a progression threshold in the identified set of content items corresponding to the enumerated content received by the content server(0121-0124).

Claims 37-40 are similar in scope to the dependent claims of independent claim 1 and are rejected for the same reasons as claims 2-21 above.

41. A method for generating replication status reports indicative of a replication status of media content items in a content delivery network (CDN) comprising:

identifying a plurality of content channels, each of the content channels having at least one content server operable to receive, store, and deliver content items to a plurality of users (0011, 0085);

enumerating a plurality of media content items within each of the identified channels, the channels indicative of a relationship to a plurality of users (0141-0144);

identifying at least one origin server in communication with the content servers, the origin servers having media content items corresponding to the content channels (0141-0144);

replicating, by transmitting from the origin servers to the content servers, the enumerated content items((0141-0144, 0121-0124);

identifying, by an event number, the transmitted content items received by each of the content servers (0141-0144);

computing a progression threshold indicative of the transmitted content items; and

Art Unit: 2143

generating, by a replication status reporter at each of the content servers, a replication status report indicative of the progression threshold event numbers (0121-0124);.

Claims 42-44 are similar in scope to the dependent claims of independent claim 1 and are rejected for the same reasons as claims 2-21 above.

45. A system for propagating media content and reporting replication status of media content in a content delivery network (CDN) comprising:

at least one content server operable to identify a set of content items for replication at a content serve (0122, 0142, 0141);

a replication status daemon in the at least one content server operable to enumerate content items received at the content server from the identified set of content items(0141-0144); and

a replication status reporter in the at least one content server operable to report the enumerated content received by indicating a progression threshold in the identified set corresponding to the enumerated content items(0121-0124).

46. A computer program product having a computer readable medium operable to store computer program logic embodied in computer program code encoded thereon for reporting replication status of media content in a content delivery network (CDN).(see abstract, summary, also 0122, 0142) comprising:

computer program code for identifying a set of content items for replication at a content server (0122, 0142);

computer program code for enumerating content items received at the content server

Art Unit: 2143

from the identified set of content items(0103-0108; 0141); and
computer program code for reporting the enumerated content received by indicating a
progression threshold in the identified set corresponding to the enumerated content
items(0121-0124).

47. A data communications device for reporting replication status of media content in a
content delivery network (CDN) comprising:

means for identifying a set of content items for replication at a content server (0141-
0144);

means for enumerating content items received at the content server from the identified
set of content items(0103-0108; 0141); and

means for reporting the enumerated content received by indicating a progression
threshold in the identified set corresponding to the enumerated content items(0121-
0124).

Conclusion

6. Accordingly, **THIS ACTION IS MADE NON-FINAL**. The Examiner strongly anticipates a Final Rejection Office Action on the next response if amendments are not properly made to the claims to perhaps place them in condition for allowance.

Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

April 5, 2007


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100